

USMC Expeditionary Energy



E2S2 Brief May 11

***Captain Brandon Newell
Expeditionary Energy Office (E²O)***

Unclassified

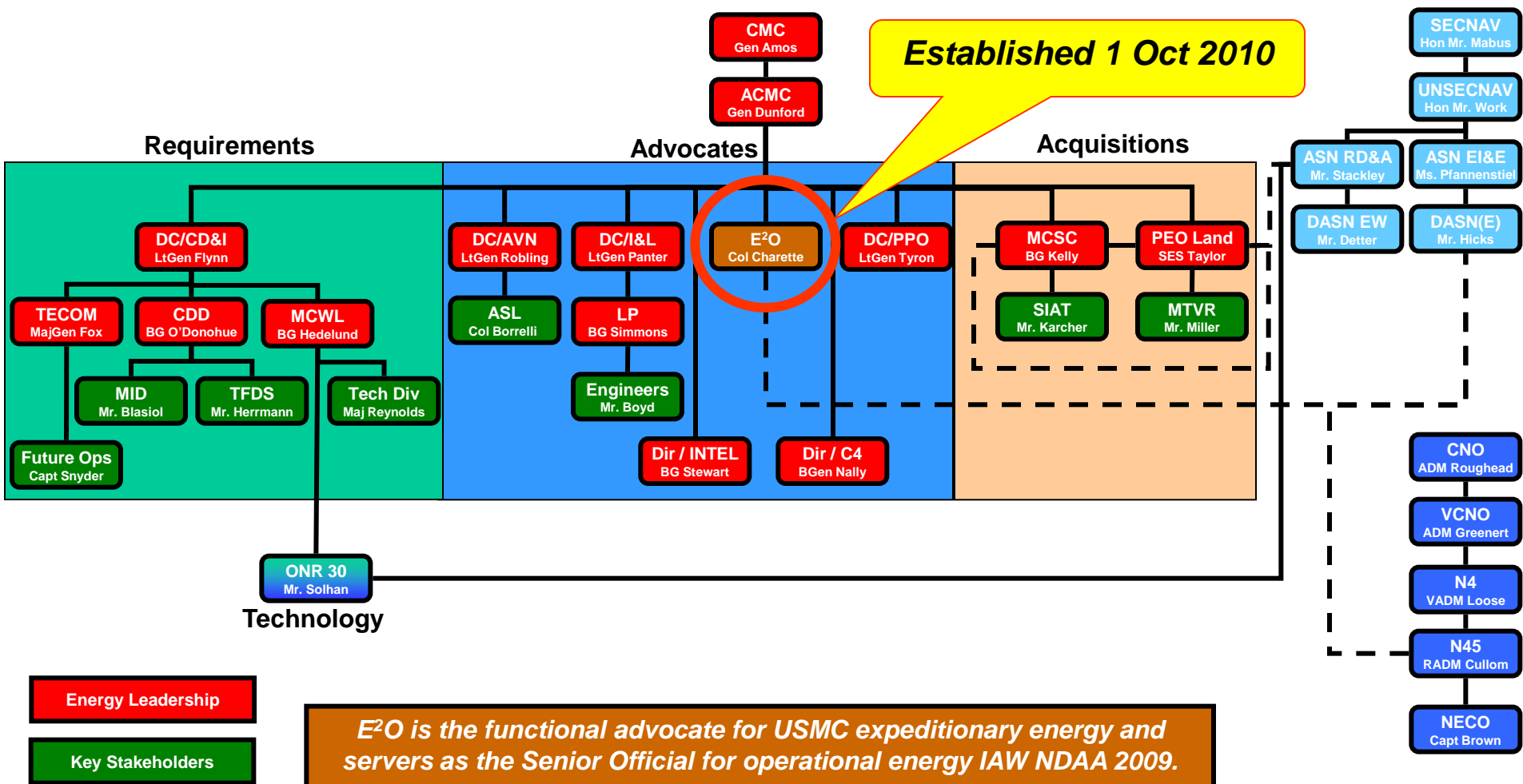
Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE MAY 2011		2. REPORT TYPE		3. DATES COVERED 00-00-2011 to 00-00-2011	
4. TITLE AND SUBTITLE USMC Expeditionary Energy				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) United States marine Corps,Expeditionary Energy Office (E2O),Quantico,VA,22134				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES Presented at the NDIA Environment, Energy Security & Sustainability (E2S2) Symposium & Exhibition held 9-12 May 2011 in New Orleans, LA.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 11	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			



USMC

Operational Energy Stakeholders

"The Marine Corps Expeditionary Energy Office will analyze, develop, and direct the Marine Corps' energy strategy in order to optimize expeditionary capabilities across all Warfighting functions."



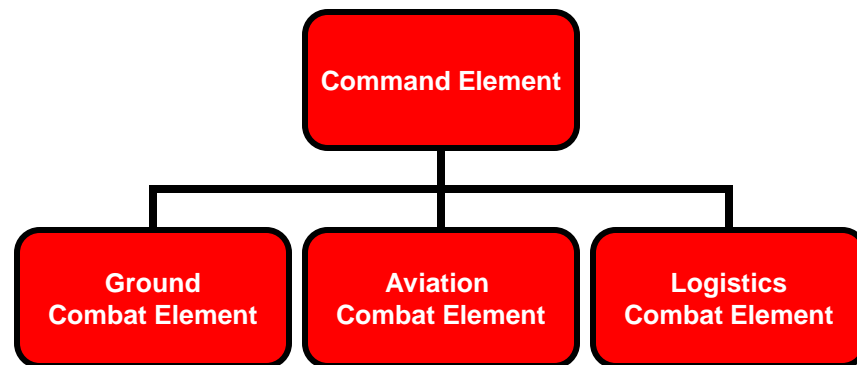
Unclassified



USMC Organizational Construct



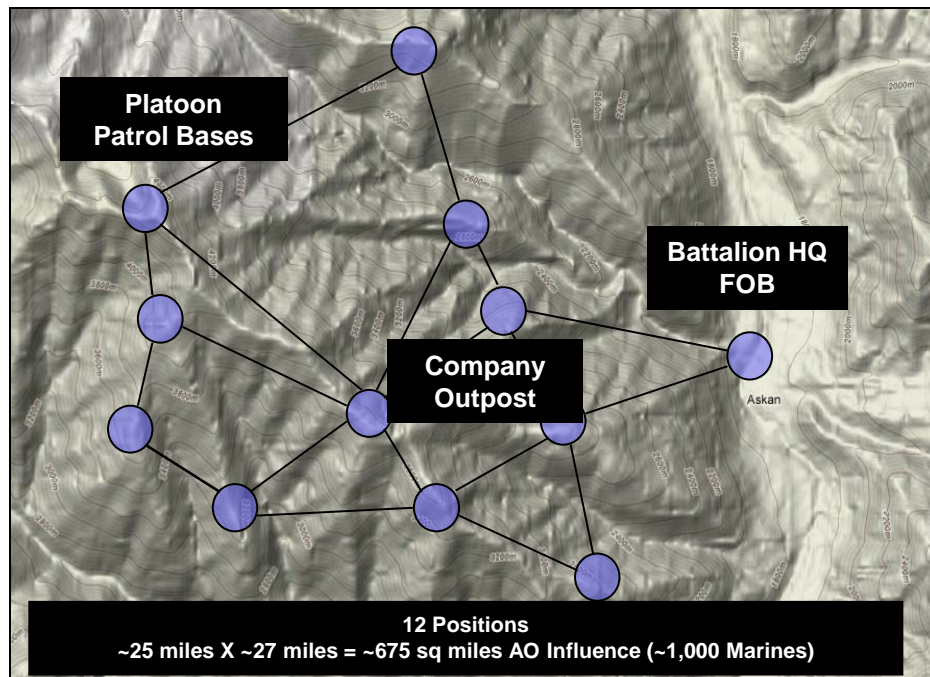
- Marine Air Ground Task Force (MAGTF)
 - Special Purpose MAGTF
 - ~150 Marines
 - 72 hours sustainment
 - Marine Expeditionary Unit (MEU)
 - ~1500 – 3 K Marines
 - 15 days of supply
 - Marine Expeditionary Brigade (MEB)
 - ~3K – 20K Marines
 - 30 days of supply
 - Marine Expeditionary Force (MEF)
 - 20K – 90K Marines
- MAGTFs are self-contained and self-sufficient
 - “Plug and Play” into Joint Force
 - Operate from the Sea and at Sea
 - Sustained Operations Ashore
 - Humanitarian Relief



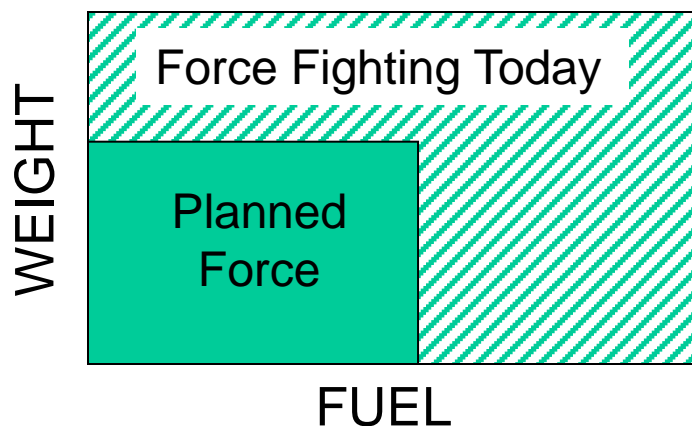
“Middle Weight Force in Readiness”



Today's MAGTF Challenge Distributed Operations



- 250% Increase in Radios
- 300% Increase in IT/Computers
- 200% Increase in # of Vehicles
- 75% Increase in Vehicle WGT
- 30% Decrease in MPG



150 Marines conducting operations
that 1,000 Marines plus conducted 10
years ago!

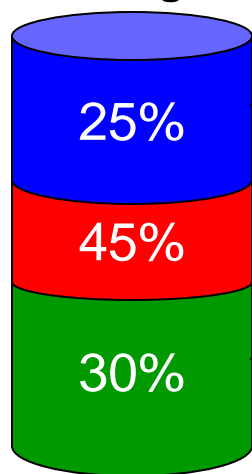


Marines in Afghanistan



Fuel Distribution:

200,000 gal/day
\$7.05/gal



Power Generation:

60,000 gal/day
\$154M/yr



#1 Threat:
Improvised Explosive Device

Wounded:
1 Marine per 50
Fuel/Water Convoys







USMC OEF Logistics Causalities

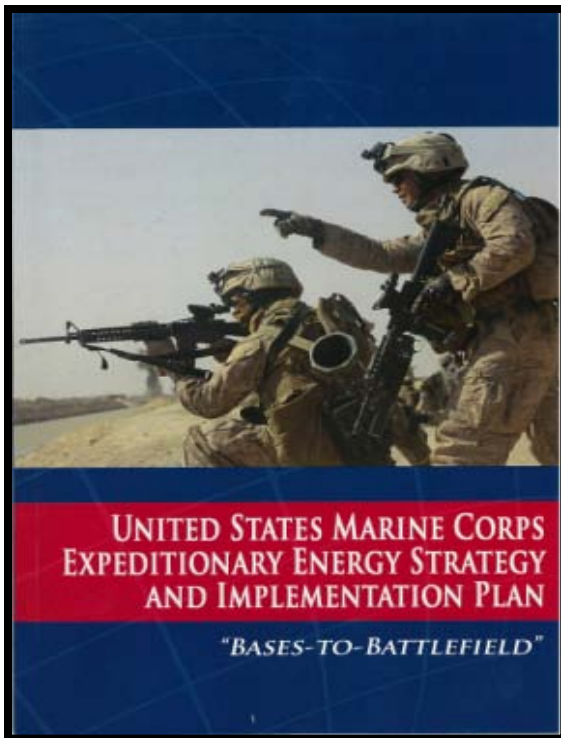
24 Mar 10 – 30 Jun 10



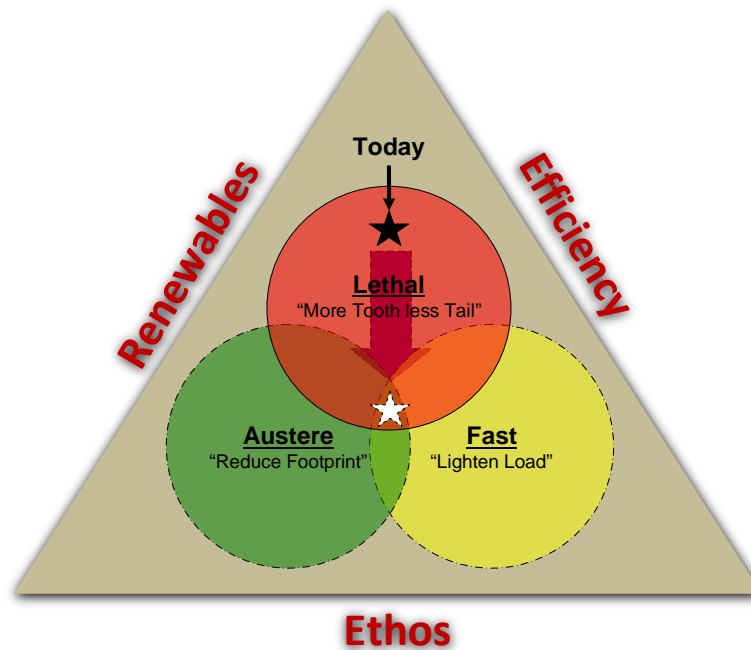
- 299 Fuel/Water Convoys (98 Days)
- **6 Marines WIA** hauling Fuel/Water
- **1 Marine WIA per 50 Fuel/Water Convoys**



Marine Corps Energy Strategy



Mandate:
Enhance warfighting capability by requiring
50% less fuel by 2025





Long Term Plan

"35th Commandant's Planning Guidance"

*Change Ethos + Increase Energy Efficiency + Renewable Energy =
Increase Combat Effectiveness*

Today

Feb 11

Apr 11

2011

2025

Fossil Fuel

Fuel
1Gal

Fuel
1Gal

Fuel
1Gal

Fuel
1Gal

Fuel
1Gal

Fuel
1Gal

Fuel
1Gal

Fuel
1Gal

USMC
Expeditionary
Energy
Strategy

Expeditionary
Energy, Water,
and Waste
CBA / ICD

Direct
S&T / R&D

Alternative Fuel

Fuel
1Gal

Fuel
1Gal

Fuel
1Gal

Fuel
1Gal

Marine / Day

Marine / Day

Strategy and Supporting Requirements
Documents Being Written in Parallel

Future Capability
Require Mobility Fuels Only
50% From Alternatives

Current Status: CMC signature 23 Feb 11
E2W2 ICD / CBA in staffing

Unclassified

